Advisory Committee for the Sustained National Climate Assessment

[DRAFT as of March 4, 2017]

Task Force: Climate Data/Projections For Design Processes

Participating Members: Daniel Zarrilli - Chair, Jan Dell, Jerry Melillo, and Michael Prather

Charge:

> This task force will *"identify and recommend improved options for establishing a sustained dialogue among architects, engineers, state/local planners, climate and physical impacts scientists, and science translators to clarify uses and needs for information on future mean and extreme conditions under a changing climate. The group will consider recommendations for structuring a dialogue, including required participation, information requirements for design processes, approaches for providing/communicating information, and resource requirements."*

Problem Statement:

Climate impact projections (for both chronic and extreme event impacts) continue to evolve based on the best available science, and are difficult to translate into actionable design criteria for individual projects, building/zoning codes, and other related measures due to the ranges and probability statements associated with the projections.

This task force aims to provide recommendations for supporting a sustained dialogue among professionals that require specific design criteria as they implement projects and other adaptation measures, consistent with the task force charge above.

Next Steps:

The task force will pursue this charge with a targeted approach:

1. Identify existing exemplary efforts

   Many organizations are grappling with the difficulties of applying climate impact projections on individual projects, building/zoning codes, and other related measures. These include professional associations like ASCE, academic institutes, and government agencies. This task force will canvas the available resources as a first step in order to understand the current landscape of recommendations for applying climate impact projections (flood, heat, etc) to projects and other adaptation measures.

2. Develop timeline of project lifecycle decision-making

   In order to effectively develop recommendations for applying climate impact projections on individual projects, building/zoning codes, and other related measures, it is critical to ground ourselves in the typical lifecycle of project decision-making. Design criteria documents take several forms, and require different inputs, depending on the type of project or other adaptation measure under consideration. The task force will evaluate the typical uses of climate impact projections and the ability to deal with uncertainty inherent in the projections in order to develop recommendations for better informing design criteria.

3. Evaluate applicability and limits of climate projections for design processes

   Due to the uncertainty that is inherent in climate projections, and the applicability of climate information that is available, whether regionally or topically, climate projections may or not be helpful for design professionals for any given project or other adaptation measure. The task force will make recommendations for evaluating the applicability and limits of climate projections for design processes.

4. Pursue recommendations for flexible adaptation pathways

   It has become clear that climate adaptation cannot happen just once. With evolving climate impacts, fiscal constraints, and changing technology, a flexible approach to adaptation over time can be a wise approach for asset management and lifecycle analysis. Flexible pathways are needed also because we can expect evolving projections for climate change based on improving climate science and the incorporation of recorded measurements. With this in mind, the task force will evaluate and develop recommendations that recognize this need for flexible adaptation pathways based on the best available science.

As a task force, we intend to hold regular conference calls as a group, and with invited subject matter experts, in order to develop and deliberate on potential recommendations that can be brought before the full Advisory Committee for the Sustained National Climate Assessment for consideration.